

Proportional Reasoning: What it Is and Isn't

plenary I

getting acquainted

percents in random order

- Ask your neighbour to guess which percent is which.

getting acquainted

Estimate.

- The percent of your daily calorie intake that is snacks
- The percent of your life that you've been a teacher/consultant/etc.
- The percent of your staff that is under 28.

past two camps

- focus on big ideas in algebraic thinking and proportional reasoning
- focus on using open questions and parallel tasks for DI and richer mathematics classrooms



and now

- focus more on how to respond to student thinking in these areas

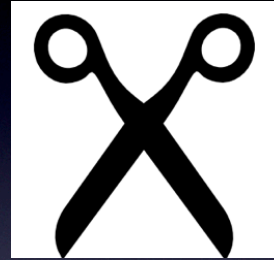
big ideas

- on the wiki and in the program booklet

how long?



175 cm



90 cm

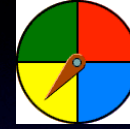
- three different ways to compare their lengths.
- Which is better?

What kind of feedback?



one group to talk
rest think about how to respond
me too

SPINNING COLOURS



- Work with a partner.
- Create a spinner where you are likely to spin 3 more reds than blues in 10 spins.
- How many more reds than blues are you likely to spin in 15 spins?

What kind of feedback?



one group to talk
rest think about how to respond
me too

mixing colours

- Jane
- Lianne
- the same shade?
- Explain.



proportional reasoning

- **deliberate use of multiplicative relationships** to compare and to **predict**

proportional reasoning



talk about how the problems you tried related to pr.

another “definition” of proportional reasoning

- unitizing
- NOT 15 as $8 + 7$



or someone might say...

- The variables p and q are related proportionally if $p:q = n \cdot p : n \cdot q$

This lunch is Papa
Bear's.



Draw a sandwich that would just
right for Baby Bear.

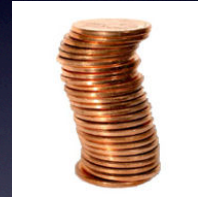
How does the picture show that $\frac{4}{5}$ is less than $\frac{9}{10}$?



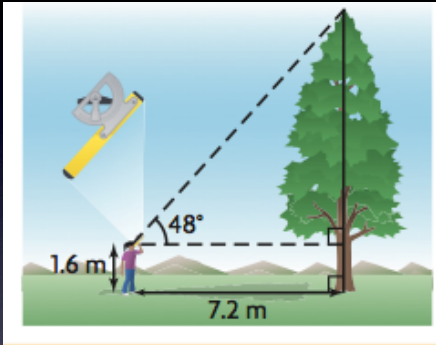
which changed more?

1 → 5 vs
96 → 106

1¢ every time someone in Ontario sneezes,
how long to become a \$1 000 000aire?



sample



What is proportional reasoning?

- OWN EXAMPLE.
- Different CONTEXT.